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Mr. Joe Grindstaff
CAL FED Bay Delta Program
650 Capitol Mall, 5th Floor
Sacramento, CA 95814

**RE: Delta Levees and Habitat Subcommittee's Review
Of Delta Conveyance Alternatives**

Dear Mr. Grindstaff:

The undersigned are co-chairs of the BDPAC Delta Levees and Habitat Subcommittee which meets regularly in conjunction with the Delta Levee and Habitat Advisory Committee. At our meetings of February 8 and March 7, 2008, we discussed the impact of Delta Conveyance Alternatives upon the levee system of the Delta and in general with respect to flood control issues in the Delta. We did so in response to the referrals for discussion of conveyance issue to other BDPAC subcommittees. Although the Delta Levee and Habitat Subcommittee had not received a request for review from your staff, we believe that a review of the flood control impacts of the conveyance alternatives as necessary and appropriate as the ecosystem, water supply, and water quality impacts.

The Subcommittee is particularly concerned with an isolated conveyance alternative. In its most basic form, the isolated conveyance alternative (Peripheral Canal) will involve the construction of about 100 miles of new massive levees through the Delta from a point near Hood on the Sacramento River to a connection with the State Water Project pumping plant and/or the Federal Central Valley Project pumping plant near Tracy, CA. Such a project

poses significant, largely unstudied flood concerns for the Delta itself and surrounding communities.

Flood Plain Obstruction. The roughly 50 miles of paired earthen banks to be constructed at or above 100-year flood levels will impede and amplify the cross country sheet flow of flood waters as they have occurred historically in heavy storms which are frequently augmented by up-stream overtopping of leveed channels tributary to the Delta. We have not been made aware of any design features which will allow such flood flows to either bypass or be collected by an isolated conveyance facility. In addition, although design apparently includes under crossings at eleven major water courses along the pathway of the proposed Peripheral Canal, we are not aware of any accommodations which would be made to pass up-stream flooding either through those eleven water courses or otherwise be diverted into this new physical barrier to flood waters. We have had unfortunate experience with similar problems with highway, railway and other infrastructures projects and would be extremely concerned about this eventuality and concerned about the apparent lack of design consideration.

Construction Integrity of the isolated Canal Itself. One of the ostensible advantages of the Peripheral Canal relates to the perceived instability of the existing Delta levee themselves. We are aware that alternative routing for the Peripheral Canal is being considered since the route designated prior to the defeat of the Canal Referendum in 1982 now would pass through subsequently developed urban areas. In fact, we have been advised by the San Joaquin County Department of Public Works that about 550 existing homes would be displaced by the original canal right-of-way through West Stockton alone.

The alternative to the original routing is a proposed westerly route through the primary zone of the Delta crossing lands which are deeply subsided and

composed largely of organic and soft clay materials. Indeed, these are the very conditions which are thought to make it difficult to preserve existing Delta levees (which have been consolidated and strengthened in place for 100 years) from high water and seismic conditions.

Building massive new levees "cross country" through the Delta primary zone would appear to be fraught with difficulty and peril, not to mention outrageously expensive. Our informal review of the construction plans for this isolated facility indicate that the canal would be unlined, the bottom (constructed by large crawling draglines) would be essentially unconsolidated, and the facility would be expected to convey water at a surface level 15-20 feet above the adjacent land elevations for long stretches.

Our experience in the Delta over many years, including witnessing the effects of flooding of islands upon adjacent lands, indicates that attempts to convey water through such a facility would result in broad scale flooding of all lands adjacent to the facility.

Furthermore, we have been advised that the proposed construction of this facility is not "seismic resistant," so in effect the facility would be constructed without adequate seismic protection through an area which is not considered to be seismic resistant with its current levee system. Lining and seismic resistant construction of such a facility, if possible, would be extremely expensive and to the best of our knowledge, these additional costs have not been included or even estimated in the projected construction costs of this project.

On the other hand, the costs of further fortifying existing Delta levees, such as would be accomplished in conveying water "through the Delta," have been studied and estimated. Since most of these costs will need to be incurred anyway in order to protect the lands of the Delta and the infrastructure within critical to the local, regional, state and national economy, it appears that

constructing a new 100 mile levee system through the Delta for the sole purpose of conveying Sacramento River water to the export pumps would be inordinately expensive and a duplication of costs.

Impairment of Existing Waterways. We have inquired as to what construction techniques would be employed in building the enormous reverse siphon structures which are planned to carry up to 15,000 cubic feet per second underneath the eleven existing waterways which the proposed isolated transfer facility would pass. It is our understanding that the cost estimates assume constructing coffer dams on either side of the proposed crossing in order to dewater the channel during construction. This prospect will cause great alarm with local irrigation and flood control agencies, not to mention boating concerns both commercial and recreation (imagine for instance the disruption that would occur for the Port of Stockton).

We are also concerned that this type of construction near existing flood control levees will cause unacceptable risk of levee failure during and after such construction.

Costs. We are not aware that any of the concerns addressed above have been considered in the preliminary cost estimates for the project as conceived which, nevertheless, is estimated to cost in the range of \$4.8 Billion for the facility itself. This is without regard to solving the problem of fish screening on an unprecedented scale and other construction and operation which will be necessary to preserve water quality and the viable ecosystem in the Delta itself. We are especially concerned that the enormous cost of this proposed alternative will compete for scarce funds with levee improvement and maintenance which must be accomplished in the Delta to reduce flood risks to

acceptable levels during seismic events and through flood threats exacerbated by global warming and climate change.

Although we have not specifically addressed other alternatives being considered for conveyance of water through the Delta in this letter, it should be obvious that passing water through existing channels of the Delta with some modifications (including alternative schemes for reducing dry year export and/or separation of "export" water from "fish" water) to accommodate environmental concerns would certainly be a more cost effective approach to this subject.

We would appreciate, and look forward to, your response.

Yours very truly,


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TMZ:csf

cc: Mike Christman, Secretary of Resources
Lester Snow, Director of DWR
Sergio Guillen, CAL FED Bay Delta Program
✓ John Kirlin, Delta Vision